

ABSTRACT

A system and method for accomplishing localized feature forming in a sheet of material and/or the localized joining of multiple sheets of material. The system and method may also be used to attach a secondary component to a sheet of material. The system and method of the present invention employs a die having a shaped cavity for receiving a portion of the sheet material. A projectile is propelled from a projectile firing device to impact the sheet or sheets of material in the area overlying the subjacent die cavity. The projectile forces a portion of the sheet material into the die cavity, imparting a shape thereto. The kinetic energy transferred from the projectile to the sheet material may be used to form a metallurgical bond between multiple sheets of material. The metallurgical bond can be used alone to join the sheets, or may be used in conjunction with an interlocking shape to provide extra strength.